THE INVENTION CLAIMED IS:

1. A method of allocating memory requests in a physical memory space defined between a first boundary and a second boundary, the method comprising the steps of:

allocating non-pinned memory requests from the first boundary; and

allocating pinned memory requests from the second boundary.

2. The method of claim 1, wherein a non-pinned region is provided from the first boundary toward the second boundary, a pinned region is provided from the second boundary toward the first boundary and a free region is defined between the non-pinned region and the pinned region, and further comprising:

receiving a pinned memory request;

determining whether a hole that accommodates the received pinned memory request exists in the pinned region;

if such a hole exists, allocating the received pinned memory request to the hole; and

if such a hole does not exist, allocating the received pinned memory request in the free region adjacent the pinned region.

3. The method of claim 2, wherein if more than one such hole exists, the received pinned memory request is allocated to a smallest one of such holes.

4. The method of claim 2, further comprising operating a background process to compact the non-pinned

region by moving at least one non-pinned memory block from an end of the non-pinned region adjacent the free region to fill at least one hole in the non-pinned region.

5. A method of allocating a memory request in a physical memory space defined between a first boundary and a second boundary, a non-pinned region being provided from the first boundary toward the second boundary and a pinned region being provided from the second boundary toward the first boundary and a free region being defined between the non-pinned region and the pinned region, the method comprising the steps of:

receiving a pinned memory request;

determining that there is no hole in the pinned region that accommodates the received pinned memory request;

determining that the free region is not large enough to accommodate the pinned memory request;

widening the free region by moving a non-pinned memory block from an end of the non-pinned region adjacent the free region to a hole in the pinned region; and

allocating the received pinned memory request to the widened free region.

6. A method of allocating a memory request in a physical memory space defined between a first boundary and a second boundary, a non-pinned region being provided from the first boundary toward the second boundary and a pinned region being provided from the second boundary toward the first boundary and a free region being defined between the

non-pinned region and the pinned region, the method comprising the steps of:

receiving a pinned memory request;

determining that there is a non-pinned memory block located in the pinned region that occupies a hole at least as large as the received pinned memory request;

moving said non-pinned memory block located in the pinned region to free said hole that is at least as large as the received pinned memory request; and

allocating the received pinned memory request to said freed hole that is at least as large as the received pinned memory request.

7. The method of claim 6, wherein the non-pinned memory block is moved to the free region adjacent the non-pinned region.

8. A digital memory apparatus, comprising:

a memory component providing a physical memory space, the physical memory space defined between a first boundary and a second boundary; and

control means for controlling allocation of the physical memory space, the control means being programmed to:

allocate non-pinned memory requests from the first boundary; and

allocate pinned memory requests from the second boundary.

9. The apparatus of claim 8, wherein a non-pinned region is provided from the first boundary toward the

second boundary, a pinned region is provided from the second boundary toward the first boundary and a free region is defined between the non-pinned region and the pinned region, and the control means is further programmed to:

receive a pinned memory request;

determine whether a hole that accommodates the received pinned memory request exists in the pinned region;

if such a hole exists, allocate the received pinned memory request to the hole; and

if such a hole does not exist, allocate the received pinned memory request in the free region adjacent the pinned region.

10. The apparatus of claim 9, wherein if more than one such hole exists, the control means is programmed to allocate the received pinned memory request to a smallest one of such holes.

11. The apparatus of claim 9, wherein the control means is further programmed to operate a background process to compact the non-pinned region by moving at least one non-pinned memory block from an end of the non-pinned region adjacent the free region to fill at least one hole in the non-pinned region.

12. A digital memory apparatus, comprising:

a memory component providing a physical memory space, the physical memory space defined between a first boundary and a second boundary, a non-pinned region being provided from the first boundary toward the second

boundary and a pinned region being provided from the second boundary toward the first boundary and a free region being defined between the non-pinned region and the pinned region; and

control means for controlling allocation of the physical memory space, the control means being programmed to:

receive a pinned memory request;

determine that there is no hole in the pinned region that accommodates the received pinned memory request;

determine that the free region is not large enough to accommodate the pinned memory request;

widen the free region by moving a non-pinned memory block from an end of the non-pinned region adjacent the free region to a hole in the pinned region; and

allocate the received pinned memory request to the widened free region.

13. A digital memory apparatus, comprising:

a memory component providing a physical memory space, the physical memory space defined between a first boundary and a second boundary, a non-pinned region being provided from the first boundary toward the second boundary and a pinned region being provided from the second boundary toward the first boundary and a free region being defined between the non-pinned region and the pinned region; and

control means for controlling allocation of the physical memory space, the control means being programmed to:

receive a pinned memory request;

determine that there is a non-pinned memory block located in the pinned region that occupies a hole at least as large as the received pinned memory request;

move said non-pinned memory block located in the pinned region to free said hole that is at least as large as the received pinned memory request; and

allocate the received pinned memory request to said freed hole that is at least as large as the received pinned memory request.

14. The apparatus of claim 13, wherein the control means is programmed to move the non-pinned memory block to the free region adjacent the non-pinned region.

15. A computer program product comprising:

a medium readable by a computer, the computer readable medium having computer program code adapted to:

allocate non-pinned memory requests from a first boundary of a physical memory space defined between the first boundary and a second boundary; and

allocate pinned memory requests from the second boundary of the physical memory space.

16. A method of handling memory allocation requests in a physical memory space, a non-pinned region being defined at a first end of the physical memory space and a pinned region being defined at a second end of the physical space, the second end being opposite to the first

end, a free region being defined between the non-pinned region and the pinned region, the method comprising:

(i) responding to a non-pinned memory allocation request by allocating free space from the non-pinned region first, from the free region second and from the pinned region last; and

(ii) responding to a pinned memory request only by one of: (a) allocating space from a hole in the pinned region or (b) allocating free space from the free region.

17. The method of claim 16, wherein step (i) includes allocating free space from the free region beginning from the non-pinned region toward the pinned region, and step (ii) includes allocating free space from the free region beginning from the pinned region toward the non-pinned region.

18. The method of claim 16, wherein step (ii) includes moving at least one non-pinned page from the hole in the pinned region.

19. The method of claim 16, wherein step (ii) includes widening the free region.

20. The method of claim 19, where the widening of the free region includes moving at least one non-pinned page from an end of the non-pinned region.